

CLAIMS

1. An isolated *RAFTIN* nucleotide sequence.
2. The isolated *RAFTIN* nucleotide sequence of claim 1 comprising a BURP domain
5 of two conserved phenylalanine residues (FF) at the N-terminus of the domain and a
consensus sequence of the formula $\text{CHX}_{10}\text{CHX}_{25-27}\text{CHX}_{24-25}\text{CH}$ wherein CH represents
each of four repeated cysteine-histidine (CH) motifs in the consensus sequence and X
represents any amino acid.
- 10 3. The isolated *RAFTIN* nucleotide sequence of claim 1 in the form of genomic DNA.
4. The isolated *RAFTIN* nucleotide sequence of claim 1 in the form of cDNA.
5. The isolated *RAFTIN* nucleotide sequence according to claim 1 comprising a
15 *RAFTIN* gene promoter sequence.
6. The isolated *RAFTIN* nucleotide sequence according to claim 1 comprising a
RAFTIN protein encoding sequence.
- 20 7. A transformation vector comprising a *RAFTIN* nucleotide sequence according to
claim 1.
8. A plant cell comprising the transformation vector of claim 7.
- 25 9. A plant comprising the transformation vector of claim 7.
10. A seed of a plant comprising the transformation vector of claim 7.
11. An RNA hairpin construct comprising a promoter operably linked to sense-
30 oriented *RAFTIN* nucleotide sequence, an intron and an antisense-oriented *RAFTIN*
nucleotide sequence.

12. A transformation vector comprising a sequence encoding the RNA hairpin construct of claim 11.

13. The transformation vector of claim 12 wherein said sequence encoding the RNA hairpin construct is operably linked to and under the control of a *RAFTIN* gene promoter sequence.

14. A method for producing a cell of a plant having male sterility or modulated male fertility which method comprises transforming said cell with the transformation vector of claim 12.

15. A method for producing a plant having male sterility or modulated male fertility which method comprises transforming a cell of said plant with the transformation vector of claim 12 and multiplying said cell to yield said plant.

16. A transformed plant cell comprising a sequence encoding the RNA hairpin construct of claim 11.

17. A male-sterile plant or seed thereof comprising transformed plant cells as defined in claim 16.

18. A method for producing a cell of a plant having enhanced male fertility which method comprises transforming said cell with the transformation vector of claim 7.

19. A method for producing a plant having enhanced male fertility which method comprises transforming said cell with the transformation vector of claim 7 and multiplying said cell to produce said plant.